Steel Barges for Carrying Coal.

The Manufacturers' Record, of Baltimore, says that a new and most promising use for steel is the construction of steel barges for the shipment of coal on the Ohio and down the Mississippi Rivers. A number of barges are now being built at Pittsburg by large coal operators, with a view to carrying coal down the Mississippi and to Habana and other West Indian ports without breaking cargo. It is estimated that there are about 11,000 coal barges on the rivers, and with the start made for the substitution of steel for these wooden barges it is believed that there will be a very r[illegible] change and that there will soon be an enormous fleet of steel ba[illegible]s handling coal on the Ohio River and its tributaries for shipment [illegible] Europe, to the West Indies, and to Central America.

sion and the products are sent to all parts of the world. A g of the raw materials required in the manufacture are found in gium, such as linen and cotton rags, linen waste, cords and threads, straw of rye, wheat, oats, barley, etc. Alfa grass and natural woods already in pulp form are imported from the United States, Canada, and the north of Europe. The works are supplied with up-to-date machinery, and very little paper is now made by hand.

The production comes under the following heads: Packing, comprising the straw of different colors, paper for newspapers, ordinary paper, semifine and fine papers, and special papers, such as vegetable or parchment paper, gelatin paper, art paper, cigarette paper, and duplex paper; also enameled and colo wall, and photographic papers. The gray card and pasteboard a pecially made in Belgium. The declared value of imports of paper fo 905 was $1,318,030, and of exports $4,632,112.

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May 19 1906

For Dredging the Plate River.

Consul Ruffin reports from Asuncion that the Government of Paraguay has approved the information submitted by the committee to study the river for the purpose of dredging.

This committee was appointed in fulfillment of the law of July 14, 1905. The President has resolved to ask the same committee to form an estimate of the cost of dredging material, the purchase of which is advised to be made through a public bid, to arrange with Argentina as to the dredging of the common passes of water, to authorize the minister of war and marine to contract through the diplomatic agents in foreign countries the services of an engineer of recognized competence to whom to confide the technical direction of the work which the navigation of the rivers requires and the conservation of the ports.

The bidding will probably be arranged for publication soon, presumably to cover a period of ninety days, so that those in the United States interested in building dredging machinery may participate. The previous report on this subject no doubt interested contractors and dredge builders, this report outlining further progress.

in the building trade. The right of foreigners to acquire land having been confirmed by the powers represented at the Algeciras conference, the demand for building materials of all descriptions, as well as for furniture, will, it is said, increase considerably. The furniture required is of a cheap and light description. There is a demand also for stationery and for note and account books. There is sure to be a great demand for tools of all sorts and descriptions, and all the many conveniences required for a modern town will be in demand. The import of British hardware fell 13 per cent during the year, the British percentage being absorbed by Belgium and France, from which two countries steel and iron girders and ironmongery of all descriptions were imported in large quantities.

LECTURES ON JOURNALISM.

NEWSPAPER WORK TAUGHT AT GERMAN AND SWISS UNIVERSITIES.

Consul T. J. Albert makes a report from Brunswick, saying as the proposition to establish a university for journalism in the city of New York was seriously discussed, it may be of interest to know the progress being made in Germany in giving instruction in this department of human activity.

The list of lecture courses at the German universities and colleges during the present summer session shows that the treatment of journalism becomes a more important branch of instruction at these institutions. During the present summer session Professor Bücher, the well-known political economist, delivers a course of lectures upon the "History, organization, and technics of journalism," both at the University of Leipzig as well as at the Commercial College of the same city. At the University of Bern Doctor Bühler gives a course upon the "Editing and news service of a newspaper, with practical exercises." The course of Doctor Schmidt at the University of Berlin upon "Public opinion and journalism in Germany" is likewise new.

At Zurich, where now the title of "doctor" can be acquired in the department of journalism as well as that in any other political science, Doctor Wettstein lectures on "History and system of press law," and lso upon the "History of the daily press to the French revolution." of this depart-

RAILWAYS AND WATERWAYS.

HARMONIOUS OPERATION AND FAVORABLE DEVELOPMENT IN GERMANY.

The prosperity of the German waterways is explained in part by the fact that the German Government has never regarded the natural and artificial waterways as a source of income, but rather as means of improving the well-being of the people.

The Constitution of the German Empire provides that only such taxes may be levied on natural waterways as are necessary for the support of the special works which facilitate traffic on them. These taxes and tolls for artificial waterways, which are the property of the State, are not to exceed what is necessary for the keeping up of such works. As a matter of fact, the taxes levied on German internal waterways are far less than is permitted in the Constitution of the Empire. The cost of transportation on the German waterways is considerably less than by rail. The freight charges between places which are situated directly on the waterways and are reached without the aid of railways are generally far less than the railway charges, and on long stretches this is all the more perceptible as the State-levied taxes can not be considered.

The relations between the railways and the inland waterways are mainly regulated by the fact that the vast majority of railways, and almost all the waterways, are the property of the State. That is why it is possible to arrange that railways and canals shall not enter into competition with one another, but mutually unite in the task of forwarding to market merchandise and contributing thereby to the economical welfare of the country. In France and other countries, where railways and canals are in different hands, there is a great deal more competition and friction in transferring goods.

The German railways, notwithstanding the dimensions of the traffic on the inland waterways, have maintained remarkable prosperity. It appears evident that the harmonious cooperation of the railways and waterways is distinctly to the advantage of the former and has contributed largely to the favorable economic development of Germany during the past 25 years.

DANUBE RIVER TRADE.

NAVIGATION RETURNS FOR LAST YEAR—GRAIN MOVEMENTS.

Consul-General Montgomery Schuyler, jr., writes from Bucharest that during the year 1905 there were recorded 1,109 vessels, with a tonnage of 1,756,000, upon the Danube.

Of these 950 were steam and 159 sailing vessels; 352 steamers came under British registration, and 129 sailing vessels were Turkish; 25 vessels were Roumanian. The average tonnage was 1,584, only 12 per cent of the vessels being more than 3,000 tons. The tonnage of the principal nations was as follows: England, 705,000; Greece, 404,000; Austria, 196,000; Italy, 123,000; Turkey, 55,000; Holland, 50,000; Hungary, 48,000; France, 42,000; Germany, 35,000, and Russia, 21,000.

The amount of grain transported was: Wheat, 8,026,000 bushels; barley, 1,666,500 bushels; rye, 1,223,300 bushels; rape, 788,000 bushels; corn, 515,300 bushels, or a total of 12,219,300 bushels. The greatest grain exportation was by the port of Soulina, 6,454,500 bushels. The port of Braila was second, with 4,853,000 bushels. The grain exported by way of the Danube was sent to Bulgaria, Holland, Italy, Spain, Germany, France, and Gibraltar. The wood and other products exported from Roumania amounted to $242\frac{2}{3}$ tons. Wood is exported through Galatz, and petroleum and benzine by Braila.

sold for drinking purposes in France, whereas 1905 showed a falling off to 172,503 hectoliters (4,557,529 gallons), or 2.8 per cent. This is not a sweeping or conclusive reform, as the absinth habit is still one of the gravest perils that threatens the manhood of France; but the statistics show that the maximum danger point has been passed, and the decline of even so small a percentage in absinth consumption is accepted as ground for encouragement and hope.

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Issues of coin and bullion from Australian mints in 1903 and 1904.

Mints.	1903.		1904.	
COIN.				
Melbourne	£3,521,780	$17,138,743	£3,743,897	$18,219,675
Sydney	2,921,500	14,217,480	2,986,000	14,531,369
Perth	4,674,783	22,749,832	4,536,771	22,078,196
Total coin	11,118,063	54,106,055	11,266,668	54,829,240
BULLION.				
Melbourne	792,594	3,857,159	479,131	2,331,690
Sydney	159,626	776,819	634,033	3,085,522
Perth	489,553	2,382,410	424,415	2,065,415
Total bullion	1,441,773	7,016,388	1,537,579	7,482,627
Total coin and bullion	12,559,836	61,112,443	12,804,247	62,311,867

JOHN P. BRAY, *Consul-General.*

MELBOURNE, VICTORIA, *January 20, 1905.*

FOREIGN COMMERCE OF THE PRINCIPAL PORTS OF THE WORLD.

The following table, compiled in the Bureau of Statistics, Department of Commerce and Labor, from latest available official sources, shows the foreign trade of the principal seaports of the world. In the case of the United States ports both the land and sea borne commerce is given; in the case of some foreign ports the sea-borne commerce only is stated. The value of the transit trade, whenever available, has been included.

Value of commerce of principal ports of the world.

Ports.	Year.	Imports.	Exports.	Total commerce.
EUROPE.				
Great Britain.				
London, including Queensborough	1903	$842,547,306	$462,206,875	$1,304,754,181
Liverpool	1903	627,915,453	557,598,986	1,185,514,439
Hull	1903	158,653,074	97,597,239	256,250,313
Glasgow	1903	70,119,734	103,394,005	173,513,739
Southampton	1903	76,599,659	70,990,449	147,590,108
Manchester, including Runcorn	1903	98,688,995	45,244,167	143,933,162
Harwich	1903	94,433,941	22,810,512	117,244,453
Grimsby	1903	49,387,339	49,877,523	99,264,862
Leith	1903	67,095,366	13,482,299	80,577,663
Tyne ports	1903	48,916,122	37,346,699	86,262,821
Bristol	1903	62,052,849	10,486,933	72,539,782
Cardiff	1903	20,984,470	50,362,868	71,347,338
Germany.				
Hamburg	1903	[a]550,751,000	[a]430,765,000	[a]981,516,000
Bremen	1903	[a]198,518,000	[a]93,939,000	[a]292,457,000
France.				
Marseille	1903	248,869,000	182,683,000	431,552,000
Havre	1903	213,619,000	150,524,000	364,143,000
Dunkirk	1903	118,639,000	25,381,000	144,020,000
Bordeaux	1903	48,850,000	60,046,000	108,896,000

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[a] By sea only.

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sible at the beginning of the fourth year for those pupils who take up the study of the Chinese language during the last two years. Students who complete the five-year course of study may be appointed at once into the active service as consular attachés. Inasmuch as they are greatly favored by the foreign office, their appointment to minor places in the service is practically a certainty.

That the academy is accomplishing the mission for which it was founded is supported by the fact that only a few weeks ago a new building was dedicated and set apart for its exclusive use.

ERNEST L. HARRIS, *Commercial Agent.*

EIBENSTOCK, GERMANY, *January 17, 1905.*

PROPOSED STRASSBURG CANAL.

(*From United States Consul Brittain, Kehl, Germany.*)

The enterprise of providing a water course from the city of Strassburg to a point on the Rhine, where boats may readily navigate the entire year, is assuming more definite form. Last week the Strassburg bankers submitted to the chamber of commerce the proposition that they will raise the sum of 20,000,000 marks ($4,760,000), providing the city of Strassburg will donate 2,000,000 marks ($476,000), and the governments of Alsace-Lorraine and Bavaria 10,000,000 marks ($2,380,000), a total of 32,000,000 marks ($7,616,000).

The idea of the bankers is to construct a canal paralleling the Rhine. from Strassburg to Sondernheim, in Rhenish Bavaria (Rhine Palatinate), a distance of about 50 miles, where the canal would enter the Rhine, and beyond which point navigation is possible the entire season. If the proposition is accepted, the government will be asked to construct the canal and lease it to a company for a period of ninety-nine years, and also to guarantee the par value of the bonds which may be issued. Some years ago a plan for deepening the channel of the Rhine was seriously considered, in which the Grand Duchy of Baden was also interested, but some claimed that the shifting sand banks in the bed o the river would make the channel very expensive to maintain.

Within the past few years extensive docks have been constructed both on the Baden and Alsace-Lorraine sides of the Rhine, but owing to the low stage of water and swiftness of the current navigation from Strassburg is practically suspended during the greater part of each year. The tonnage which arrived at Strassburg by the Rhine amounted to 425,364 tons in 1904, three-fourths of which came up the river during the months of April, May, June, and July, during the stage of high water. Navigation is not carried on above Strassburg, owing to the swiftness of the current.

JOSEPH I. BRITTAIN, *Consul.*

KEHL, GERMANY, *January 16, 1905.*

ENLARGEMENT OF THE PORT OF ANTWERP.

(*From United States Consul-General Howe, Antwerp, Belgium.*)

The sudden decision of the Belgian Government to adopt the new plans for enlarging the port of Antwerp has come as an agreeable surprise to the shipping world. For the past twenty years the necessity of enlargement has been recognized by every interested party, but during that time it has been impossible to agree upon a plan of extension to satisfy everybody interested. Some ten years ago two parties were formed, one advocating the enlargement by centralization, that is to say, by constructing docks and basins on the left bank of the river Scheldt at the Tête de Flandre, opposite the center of the city of Antwerp, the other clamoring for an extension at the north of the city, the cutting of an entirely new bed for the river Scheldt, and the conversion of the old bed into a vast basin.

To the plan for extending in the direction of the Tête de Flandre interprovincial obstacles were raised. The Tête de Flandre is in Flanders, and it would be of little use to that province were the province and city of Antwerp to purchase the land necessary for the extension. On the other hand, Antwerp did not see the advantage of spending money on the territory of another province which would reap all the benefits. That the extension is an urgent necessity is more strongly demonstrated than ever, and during the past few years much valuable time has been lost in discussing multitudes of projects. In the meantime tonnage has been increasing until Antwerp has become the third port of the world, and it is with difficulty that berth room or anchorage is found for the incoming traffic.

For the past two years little has been heard of the extension projects and the Government has been accused of procrastination, until, on Friday, April 14, the news was announced by the minister of finance, Count de Smet de Naeyer, that after a careful and laborious study of two years the Government had elaborated a scheme that would give satisfaction. Its execution will cost something like 250,000,000 francs ($49,250,000) and, it is estimated, will take ten years.

The plan now adopted is far more elaborate than that first chosen by the Government, although it comprises all the original propositions which, some years ago, received the approbation of eminent engineers of both hemispheres, notably those who had charge of dredging in the Mississippi River. In fact, I have been informed that in carrying out the cutting of the new river bed the Government will probably use the same type of dredging machine employed by the American engineer, Bates, in dredging the Mississippi, which has been generally recommended by most of the engineers on account of the rapidity of its work.

Eleven years ago an eminent engineer who took a prominent part in the Antwerp International Exhibition of 1894 stated that the plan for cutting the new bed was minutely examined by the jury of which he was a member, and which was composed of competent engineers from all parts of the world. Opinion, he said, was unanimously in favor of this scheme, and it was furthermore agreed that the rectification of the course of the Scheldt was an absolute necessity, owing to the constant danger of the present river bed becoming blocked by the movable sand banks. This opinion has now become more general, although at first it was earnestly opposed by the municipal authorities of Antwerp. It is now claimed, however, that by diverting the course of the river and giving it a deeper bed all chances of shifting sand banks will be avoided, and that the present dangers to navigation caused by the sharp bends in the river will be entirely overcome.

The immediate necessity for prompt action was very keenly felt as far back as 1897, when the city of Frankfort-on-the-Main commenced a campaign against Antwerp and in favor of Rotterdam. The Frankfort Chamber of Commerce urged certain members of the Reichstag to advocate the withdrawal of the proposed stipulation in the German postal contracts with the North German Lloyd Company that the steamers of that company must call at Antwerp and Rotterdam, holding that the call at Rotterdam was sufficient. There was no doubt at the time that the Rhenish provinces were and that they still are afraid of the competition of the port of Antwerp, and inasmuch as Holland is not an industrial country and does not compete with them, they were looking for an opportunity to favor Rotterdam at the expense of Antwerp. The reason for this is clear. Belgium is encroaching upon German trade; she is supplying the markets of the Far East to a great extent, and the management of the North German Lloyd sees that it is to its advantage for its steamers to call at Antwerp and carry away the thousands of tons of dead weight cargo that await them.

The Frankfurter Zeitung at that time published erroneous statements detrimental to the port of Antwerp. The Antwerp Chamber of Commerce took the matter up and called the attention of the Belgian Government to the unjustifiable attack. A full report, proving the misrepresentations of the Frankfort Chamber of Commerce, was published in Germany and sent broadcast throughout that Empire, putting to confusion the detractors and serving as a huge advertisement for the port of Antwerp. The Rhenish deputies, however, still held to their purpose and tried to strike a blow at Antwerp, but the special committee appointed by the Reichstag to examine the question of postal subsidies voted by 10 to 2 in favor of calling at Antwerp. The Reichstag upheld the vote of its committee. So far, then, Antwerp has held its own. But the Government understands fully that on the least excuse for complaint her rivals will jump at the opportunity to pro-

claim the superiority of Rotterdam, and that it behooves it to see that the port of Antwerp's maritime facilities are and remain such as to defy all European competition.

While the great plan of extension has been under examination, the Government has added 6,500 feet of new quays on the south river front and has begun work on new docks to the north of the American and Lefebre docks, with direct communication by a new sluice into the river at the Austruweel bend, leading from the Lefebre dock, and allowing the admission of vessels drawing 28 feet of water. On the completion of these docks, known as the intercalary docks, vessels will no longer have the annoying, roundabout journey through the Kattendyk, but will be able to enter the northern docks directly from the river, an improvement which will relieve the traffic to a very great extent.

Now comes the new and vast extension project, which incorporates the new docks above referred to, and which will at least triple the area of the port of Antwerp and make it larger than any port in existence, giving it 60 kilometers (37.3 miles) of running quays.

The Government project provides first for the cutting of a canal, forming a quarter of a circle, entering the river at the Kruischanz, a point just above the town of Lillo, and joining the dock system at Antwerp by entering the northwest wing of the new intercalary docks in course of construction to the north of the present Lefebre dock. Extending inland from the right bank of the canal will be nine open basins. This canal will be of gigantic proportions, more than 5 miles long and 815 feet wide. The canal will enter the river at the Kruischanz by three sluices, 975 feet long, 98 feet wide, and 39 feet deep. The open basins along the right side of the canal will be 3,900 feet long by 650 feet wide. Near the canal sluice gates there will be a circular open basin 1,625 feet in diameter. Dry docks 812 feet long will also be constructed on the same side of the canal.

When the canal is completed the work on the new bed of the river will be commenced. The new bed will begin at a point above the Kruischanz, and the new canal will reenter the present bed of the Scheldt just above the Austruweel bend, between the new grain warehouse and the Rhine quay. During the damming of the old bed of the river the new canal will insure navigation, so that at no time will there be an interruption of traffic. Engineers say that with the modern rapid dredging and excavating machinery the work may well be completed in ten years. The great island formed by the new and the old bed of the Scheldt will absorb the villages of Austruweel, Oorderen, and Willmarsdonck, which will cease to exist, and the land will be available for all kinds of industry, and might well be used for the establishment of the free port so frequently clamored for by the Antwerp trade.

There has been much speculation as to whether the new competing service will not greatly affect the traffic between Kobé and Osaka, on the Imperial Government railway. Besides the difference of fare, which is 10 cents on the tram and 17 cents third class and 50 cents first-class on the steam cars, the electric cars run every twelve minutes against every hour on the steam railway, and have 30 stopping places as against 3.

On the whole, however, it is more than probable that the new line of cars will cause a very considerable diminution in the receipts of the Government railway between these two cities.

The amount of paid-up capital in this company is $742,500.

Chile-Bolivian Railroad.

According to a report sent in by Mr. Ames, secretary of legation at Santiago, Chile, the Chilean and Bolivian Governments have, agreeably to a treaty of peace and amity, signed October 25, 1904, entered into a convention under which a railroad is to be built and operated between Arica in Chile and La Paz in Bolivia. The respective Governments, through their diplomatic agents, have agreed upon the terms to be observed and the methods to be followed; that is, as far as such terms and methods are susceptible of diplomatic and previous arrangement.

The object of the road is the development of the industrial and commercial relations between the two countries. Both countries are to

MANCHESTER CANAL.

Consul-General Bradley sends a clipping from the Manchester Guardian which gives the record of traffic on the Manchester Canal for a term of years. The following table gives for each year of the existence of the port of Manchester the number and total tonnage of vessels entered from foreign and colonial ports, together with the average tonnage per vessel:

Year.	Number of vessels.	Net registered tonnage.	Average per vessel.
1894	402	201,105	500
1895	575	317,625	552
1896	733	480,627	655
1897	667	516,837	775
1898	684	576,792	843
1899	715	682,517	955
1900	782	787,497	1,007
1901	762	758,670	996
1902	859	911,372	1,061
1903	886	1,024,802	1,157
1904	862	1,036,172	1,202

Manchester is now in connection with all parts of the world. The list of the places whence the ships come to her docks and whither those that leave them go includes every important port, for although Persia does not appear on the shipping lists of the city, it has regular and frequent sailings to the Persian Gulf.

MUNICIPALITY OF MOSCOW.

POPULATION, ASSETS, REVENUE, AND EXPENDITURE.

Consul-General Frank D. Hill, of St. Petersburg, furnishes the following statistics for the city of Moscow, prepared by the president of its municipal council, coincident with the offering, in London and Amsterdam, of a loan, to be devoted to permanent provisions for the extension of its industrial enterprises:

The population of Moscow has increased from about 1,040,000 in 1897 to about 1,400,000 in 1908. The assets of the municipality are taken at the original cost price without regard to their present greatly enhanced value, and are increasing yearly through the continual purchases of property and extensions of industrial enterprises. On January 1, 1907, their book value stood at $68,588,000, divided as follows: Freehold land, buildings, etc., $29,347,575; waterworks, $12,893,540; tramways, $3,865,590; sanitary works, $5,904,475; gas works, slaughterhouses, etc., $7,201,245; Government and other liquid securities, $9,375,575. The book value in 1906 was $64,441,950, and in 1901, $34,902,580. The indebtedness of the municipality on January 1, 1907, was $29,168,055, outstanding bond issues, $20,688,065, and temporary advances $8,479,990. The revenue of the municipality in 1906 was $12,358,970. For the ten years ending with 1903 a surplus was shown each year in the municipal budget, but in 1904–1907, owing to war and subsequent disturbances, deficits occurred amounting in all to $1,789,625, inclusive of a voluntary contribution of $515,000 to the war fund, but these deficits were more than covered by the surplus and reserves of former years.

The estimated expenditures and revenue of the municipality for 1908 are as follows: Expenditures—administration, $1,215,400; maintenance and repair of streets, $900,735; schools, $1,280,290; hospitals, $2,193,900; workhouses, $745,205; barracks, police, etc., $1,328,700; expenses for industrial enterprises, $4,768,900; service of debt, etc., $1,807,135; total, $14,240,265. Revenue—house taxes, $3,038,500; income on leases of town properties, $914,640; interest on liquid capital, $425,390; taxes on hospitals, cabmen, etc., $2,084,205; miscellaneous revenue, $786,920; income from industrial enterprises, $6,990,610; total, $14,240,265.

The loan will be devoted in the first instance to the repayment of the temporary advances made for the purpose of developing the industrial enterprises of the town, and subsequently to the further extension of such enterprises.

Agricultural Literature Becoming Popular in Latin America.

Consul E. H. Plumacher states in a report from Maracaibo that during the last few years the South American people have found out that their future lies in the development of their agricultural resources. The people are eager to study agriculture and become better acquainted with the tilling of the soil. Everywhere agricultural societies are being formed, and books and magazines on this subject are much sought after. Some magazines printed in Spanish in the United States are becoming quite popular in Latin America, and are good advertising mediums for reaching the consumers.

GRAND CANAL IMPROVEMENTS.

CHINESE PLANS FOR MAKING NATIONAL WATERWAY OF MODERN VALUE.

Consul-General James W. Ragsdale makes the following report from Tientsin on the dredging and improvement of the Grand Canal of China:

The viceroy of Chihli has memorialized the Throne to the effect that he has received a communication from the board of posts and communications in connection with the proposed dredging of the Grand Canal from Chihli through Shantung to Kiangsu. This is to be done with a view to running steamboats and launches for facilitating communication, and also for the conveying of the mails of the Imperial Chinese post-offices in North China.

The viceroy states that the canal is divided into two parts, viz, Peiyunho and Nanyunho, or North and South canals, which extend about 240 miles. Formerly about 300,000 taels (tael=about 70 cents) were spent every year for the repairing of this canal, which was largely used for transporting the tribute rice from South China to Peking, and even now about 60,000 taels are required for this purpose annually.

As the canal is an important inland waterway connecting South and North China, it will be much better, the viceroy points out, to spend a certain sum of money to dredge it properly, so as to last for many years without yearly repairs. The cost will be borne by the provincial treasuries of Chihli and Shantung if imperial sanction is received.

All the leading Chinese merchants are in favor of the proposed work of dredging of the canal and the building of proper embankments along both banks. It is proposed to do the work with foreign dredgers and the cost is estimated at 600,000 taels. It is now reported that the proposition has been sanctioned by the Government.

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time to time. In consequence of this intense rivalry excessive rate cutting in the conveyance of passengers and cargo has been and is being indulged in to the discomfort of all the companies concerned.

Japanese advantages consist in proximity, cheap labor, quick transportation, knowledge of the country's customs, and in the confidence the Chinese have in Japan. They also take foreigners in first-class Chinese vessels. In vessels of other companies no intermingling is allowed. The labor employed on the vessels is cheap, efficient, diligent, and thrifty. This labor can not only rival the best operatives on other boats on the Yangtze, but can save money out of its meager pay. From such advantages it would seem that the Japanese must eventually win.

FABRICS FOR AFRICA.

CLASSES OF COTTON GOODS PREFERRED BY NATIVES.

German merchants are doing an important trade in east Africa in the native clothing known as kangas, which are almost entirely made in the United Kingdom and the Netherlands.

For these goods there is an enormous sale all over east Africa, the women being very fanciful about the latest fashion in pattern or coloring, so that a man, if he wishes for peace in his household, must present his wife or wives with a new pair of kanga at least once a month. The article is a square of cotton cloth, 6 feet 6 inches by 4 feet 6 inches, printed in colors, two of them forming the complete dress of a native woman.

In his report from Pemba, a British consular agent remarks concerning the local trade in these goods that the women prefer quiet colors; the favorite at the present moment is a cotton cloth of pale lilac, with a wide black border, and in the center some design in black. He has seen traction engines, a hand of playing cards, or simple black stars, and many other designs, and suggests that animals, excepting dogs or pigs, would prove attractive, especially lions or leopards. The sale price of a kanga is 1 rupee (32½ cents) each, or 2 rupees (65 cents) per pair.

CHEAP GOODS WANTED.

Lately there has been introduced a thin flannel kanga of bright colors, stripes alternately black and pink, 1½ inches wide, with a narrow line of yellow between them. These are smaller than the cotton kanga, being made in rolls 2 feet wide. Two lengths of 5 feet 9 inches sewed together make a kanga 4 feet wide and 5 feet 9 inches long. The price is 4 rupees ($1.30) each, or 8 rupees ($2.60) per pair. As these are too expensive for the very poor, cotton kanga made with similar stripes would probably have a large sale. Of course the flannel kanga are made with stripes of many different colors, one with alternate brown and dark blue stripes, and a narrow line of black between is much liked. There is a large sale in Pemba of cheap cotton vests, made in Spain and Germany, the price from 8 to 16 cents, according to the size. There is a constant demand for kaniki, i. e., Indian cotton cloth dyed with indigo, which a few years ago held the market. It is much used by both men and women as a working dress in the fields

and by women as mourning. A substitute made in the United Kingdom and the Netherlands has of late years commanded a good sale. This latter is dyed with a chemical dye which resembles indigo, gives a smooth and shining surface, and in appearance is better than the Indian article, though it does not wear so well.

AMERICAN MANUFACTURES.

EXTENT OF INDUSTRIES—EMPLOYEES AND WAGES.

The factory census of continental United States and Alaska in 1905 is graphically summed up in a monograph just issued by the Census Bureau.

The census of 1900 showed 512,254 industrial establishments, with 5,308,406 wage-earners, and products, valued at $13,004,400,143. For the 1905 census, however, certain industries, such as custom millinery, custom tailoring, dressmaking, taxidermy, cobbling, carpentering, and custom grist and saw mills were omitted. The net result therefore was an advance in the five years from 207,562 to 216,262 in the number of manufactories; from 4,715,023 to 5,470,321 in the number of wage-earners, and from $2,009,735,799 to $2,611,540,532 in their wages; and from $11,411,121,122 to $14,802,147,087 in the value of products.

Women wage-earners are reported for 316 of the 339 classes of industries, and increased in numbers from 918,511 in 1900 to 1,065,884 in the census of 1905. The greatest increase is shown for the manufacture of tobacco, cigars, and cigarettes. New York State leads in the employment of women, with garment making most prominent. The American factory women, including girls over 16, earned in 1905 the sum of $317,279,008, or a per capita of almost $298, against an average annual wage for men, 16 years and over, of about $534, though the limitations of this census prevents fixing these wage means as accurate. Pennsylvania ranks first and Massachusetts second in the number of children employed.

The capital invested in the various industries last year was $2,845,234,900 for food and kindred products, $2,147,441,418 for textiles, $2,176,739,726 for iron and steel and their products, $1,223,730,336 for lumber and its remanufactures, $705,747,470 for leather and its finished products, $857,112,256 for paper and printing, $501,266,605 for beverages, $1,031,965,263 for chemicals and allied products, $922,262,456 for metals and metal products other than iron and steel, $643,924,442 for vehicles for land transportation, $391,230,422 for clay, glass, and stone products, $331,117,681 for tobacco, $82,769,239 for shipbuilding, and $941,604,873 for miscellaneous.

Utilization of Nitrogen.

The Badische Anilin und Sodafabrik in Ludwigshafen am Rhein, Germany, propose to erect, at a cost of over $7,500,000, a factory in which the nitrogen in the air is to be utilized for the manufacture of a preparation similar in its properties to Chile saltpeter. The works are to be driven by water power from the River Alz in the Palatinate.

ENGLISH LOCOMOTION NEEDS.

OPENINGS FOR MOTOR BOATS AND ELECTRIC DELIVERY WAGONS.

Consul-General Robert J. Wynne, writing from London, says that it is suggested by a competent authority there, from whom a report has been sought on the question of American exportation of automobiles, motors, and other accessories of this particular industry to England, that the biggest market and the most hopeful for results in American manufactures is in connection with petrol and paraffin engines for motor boats and electric delivery wagons. This British authority says:

Looking at the history of the cars that American manufacturers have sent to England it can not be doubted that such cars have not displayed themselves to the same advantage as foreign cars of other makes have done in England, notably, the French, German, and Italian. At the present time the only American car which has made for itself anything like a reputation sells in this country for something over £500 ($2,500). A smaller car has earned for itself a fairly good reputation, but the design is against it to some extent, as it is not fashionable in shape and is most conspicuous among the generality of small cars on the road. It is in other directions that American manufacturers must look for their market. Two suggest themselves at once. First, the supplying of engines for motor boats, and, second, the supplying of electric vehicles for commercial purposes.

AN OPENING FOR ENGINES FOR MOTOR BOATS

With regard to the question of engines for motor boats, the Americans have experimented much more than we in England have with the type of engine known as the 2-cycle engine, as opposed to the usual 4-cycle engine, which is to be found in the vast majority of petrol motor cars. There is much to be said for the 2-cycle engine in its simplicity, its abolition of a great many working parts, and, under lines of proper design, its accessibility. In England we have practically dropped the 2-cycle engine, as we have been so busy with supplying the immediate needs of the moment that we have had no time for experimenting with this interesting type. The 2-cycle engine is a type extremely useful for motor-boat work, however, and any firm of American manufacturers which has the time and money to push it for the first few months at a loss—as they would certainly have to do—could find a good reward later.

I have considered the question of the electric commercial vehicle, a type which I gather from the American motor car papers is very successful in America. In England it is practically unknown, and at the present time in London I believe I am correct in saying that there are only about half a dozen electric vehicles used for delivery wagons, because the usual argument against the use of electric wagons has been the high cost of running. For certain trades there is no doubt that the electric delivery wagon would be far more suitable, especially in those trades which supply food, and where the fumes of petrol are thought to taint the food. There is a big market for electric vehicles in London at present for delivery purposes, if the American manufacturers are prepared to prove that the electric vehicles cost no more to run than the petrol vehicles, or that if it costs a little more it has its compensating advantages.

ROUMANIAN DEVELOPMENT.

INCREASE IN POPULATION AND PRODUCTION—TRADE WITH AMERICA.

Roumania has been holding an exhibition at Bucharest which has brought out some interesting statistics with reference to the development of that country since 1866.

The population has increased during the forty years in question by 2,345,000, and now totals nearly 6,000,000. The area of land under cultivation has increased by nearly 3,000,000 hectares (hectare = 2.471 acres), the annual production of wheat by 39,000,000 hectoliters (a hectoliter = 2 bushels 3 35 pecks), and of maize by 15,000,000 hectoliters. Cultivation has also improved, not only in extent, but in quality. The production of wheat per acre has very largely increased, the rate now being more than double what it was in 1866. The development of the petroleum industry has been very large during the last ten years. In 1866 the output of petroleum was only 9,515 tons, whereas in 1905 the total amounted to 496,870 tons. The entire railway system of 3,000 kilometers (kilometer = 0.62137 mile) has been built up in the forty years. There has naturally been a considerable increase in the national debt from 80,000,000 francs, involving an annual interest payment of 11,000,000 francs, to 1,443,000,000 francs at present, with an interest payment of 89,000,000 francs (franc = $0.193). In 1876 there was a budget deficit of 18,000,000 francs, while this year there is a surplus of at least 10,000,000 francs.

INCREASE IN EXPORTS TO VARIOUS COUNTRIES.

According to statistics which have been published by the Roumanian ministry of finance the value of the exports from that country in 1905 was 457,000,000 francs. This is the highest value on record, the five years' average ended with 1905 having been 360,000,000 francs. On the other hand, the imports amounted to 337,000,000 francs, a total which, although less than the 390,000,000 francs recorded in 1898, is still higher than the 299,000,000 francs representing the average of the five years ended with 1905. It is noteworthy in regard to the Roumanian import trade that Austria-Hungary occupies the premier position, the percentage of goods received from the dual monarchy having been 28 per cent in 1905, as compared with 16 per cent in 1891. The imports from Germany have, however, declined from 31 per cent in 1891 to 27 per cent in 1905; those from Great Britain have receded from 31 per cent to 15 per cent, respectively, and those from France have fallen from 9 per cent to 5 per cent, respectively, in the same years.

On the export side of the account the statistics show that 75 per cent of the total is composed of cereals, and that Belgium and Holland received one-half of the aggregate exports in 1905. The figures are 32 per cent for Belgium in 1905, as contrasted with 15 per cent in 1891, and 18 per cent in the case of Holland, as against 1½ per cent in 1891. Italy occupies the third position with 10 per cent and 2 per cent in 1905 and 1891, respectively; Austria-Hungary ranks next with 9 per cent and 8 per cent, and France is represented by 4 per cent and 3½ per cent, respectively. The exports to Germany have, however, fallen

from 11 per cent in 1891 to 7 per cent in 1905, and those to England have declined from 52 to 7 per cent, respectively.

The United States imported from Roumania direct only $4,026 in value for the fiscal year of 1906, but more came indirectly from other countries. The exports to Roumania in the same time were $617,608 worth, a decline of $284,898 from the fiscal year of 1905.

Spoiled Fish Causes Leprosy.

Jonathan Hutchinson, an eminent Englishman, writes to the London Times that there is not the slightest cause for alarm concerning the prevalence of leprosy in the Rhone Valley in Switzerland, which is visited by many tourists. He says that there are more lepers in London than in the whole of the Valais Canton, and that in Norway the number may probably be multiplied a hundredfold. Yet no one fears to reside in London or to visit Norway, and he says that no visitor ever contracted the disease in either place. The disease is well known to occur all along the Mediterranean coast, and at San Remo there has for a long time been special accommodations provided for lepers. He says that the development of leprosy in the Rhone Valley is due largely to the artificial demand for fish on the fast days. The natural supply of fish is limited. Railway communication has been developed, and just as has been the case in Cape Colony, leprosy has resulted. It is the poor and those living at a distance from shops who are likely to keep their fish too long and eat it in bad condition.

More Schools for Spain.

Consul B. H. Ridgely writes from Barcelona that the desire to be educated is rapidly developing in all of Spain, except perhaps Andalusia.

There is a serious feeling that more money must be spent upon schools, and that school attendance must be made absolutely compulsory. The announcement by the minister of public instruction of the Government's intention to establish 5,000 more schools in Spain has been received with warm approval by the press. The need of this movement is shown by the fact that in Spain only 11.84 out of every 100 inhabitants attend school, whereas the rate in the United States is 23.2. Other countries rank as follows: France, 14.37; Austria, 15.2; England, 17.45; Germany, 19; Switzerland, 21.39. Furthermore, the Spanish schools have only one master for every 84 children, while in the United States there is a teacher for every 36 scholars.

Cotton for Greece.

Consul-General George Horton, of Athens, reports that Greece charges no import duty on raw cotton, and there is a considerable importation for manufacturing—in 1904, 1,462,726 okes (oke=2.82 pounds), of which 385,343 were American, 844,211 Indian and Turkish, and 233,172 Egyptian. Not much cotton wadding is imported into Greece; during the year 1904 only 1,707 okes, mostly from England. There is a heavy duty on cotton wadding, 145 drachmas (drachma=18 cents) the hundred okes.

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FOREIGN TRADE OPPORTUNITIES.

[Inquiries in which addresses are omitted are on file at Bureau of Manufactures. In applying for addresses refer to file number.]

Consuls are requested to contribute to this department.

No. 433. **Panama canal supplies.**—The Isthmian Canal Commission, Washington, D.C., invites proposals until November 15 for door and window casings, doors and blinds, dynamite, electric exploders, valves, bolts, twist drills, screw plate, rivet sets, staples, nails, hammock hooks, rail benders, car movers, sheet lead, packing, paints, varnish, white lead, white zinc, putty, beeswax, shoemaker's wax, soft soap, spelter, grass seed, sandpaper, gage glasses, rowboats, oars, desks, chairs, etc.

No. 434. **Starch-making machinery.**—American consul in Mexico has an inquiry for starch-making machiney, especially for peeling and rasping the yuca or cassava tubers.

No. 435. **Turkey feathers.**—A Spanish manufacturer of feather dusters from ostrich feathers desires to also manufacture these articles from turkey feathers and requests the names of American feather dealers. He has heard that Chicago is a center of supply.

No. 436. **Railway supplies and mining development.**—Consul-General A. L. M. Gottschalk, of Mexico City, advises that the Mexican Government has awarded a contract to G. T. Hilbert, representing G. C. Palmer, of Zacatecas, for the construction of a railroad between Chalchihuitos, State of Zacatecas, to some point on the Mexican Central road in the State of Durango. Twenty kilometers (kilometer=0.62 mile) are to be built during the first two years, and 20 kilometers per year thereafter. This will bring the completion of the line within a period of six years. The company will enjoy for five years the privilege of free importation of materials and supplies. Both this and previous concessions received by Mr. Palmer for new railroad lines in the State of Zacatecas will doubtless have considerable effect upon the development of mining.

Business Failures in England.

The annual bankruptcy return of the Board of Trade shows that during last year in England and Wales there were 8,603 bankruptcies, a decrease of 28 on the year preceding. The estimated loss to creditors was £7,665,088 (£ = $4.86), a decrease of £1,706,612, as compared with 1904. The number of failures of women in 1905 was 496, as compared with 487 in 1904.

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DEPARTMENT OF COMMERCE AND LABOR—BUREAU OF MANUFACTURES

DAILY CONSULAR *and* TRADE REPORTS

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CANAL DEVELOPMENT IN EUROPE.

ARTIFICIAL WATERWAYS RECOGNIZED AS A PUBLIC NECESSITY.

The London Standard recently contained an article in which the utility of canals was discussed, and in the course of which the progress made in the construction of these waterways in Europe was described. In contemplating the possibilities of railroads the use of canals and need for their further development seemed to have passed away, and general acquiescence was given the demand for their purchase by the railroads. But it was discovered that, with the progress of the times, the capacity of the railways in solving the question of good traffic was limited, and attention was again turned to canals, and this agency for transportation was taken up with renewed vigor and energy. Recounting what has been done in canal construction by European countries the Standard says:

The digging of the great canal across the Isthmus of Suez, a colossal feat of engineering in those days, aroused the world, and set men's minds thinking that perhaps after all the day of canals had not passed away. The new era of affairs on the Continent, brought about by the Franco-Prussian war, proved in a curious way to be an important factor in promoting the use and development of the canal system. On the one hand, France, seemingly crushed by devastating war and the burden of a huge indemnity, set to work to improve the industrial condition of the people. To this end a commission was appointed to inquire into the railways and other means of communication. It followed naturally that it found the canal system of the country neglected and falling into disuse, and at once money was voted for its improvement.

On the other hand, the statesmen of Germany, recognizing that the true greatness and supremacy of a nation come not alone from war and conquest, turned their energies to facilitating the commercial growth of their Empire. Before 1870 canals languished, but by 1875 public opinion was sufficiently educated to understand the necessity for a development of the inland waterways. This feeling was stimulated by the dissatisfaction with the high rates of the State railways, and traders began to avail themselves of the low freights on the then existing waterways. During the ten years, 1890–1899, a sum of £14,950,320 was expended on inland waterways, mainly on the canalization of rivers.

CONSTRUCTION BY GERMANY.

Within the last few weeks a most extensive programme has been sanctioned by the Prussian government, involving an expenditure of £16,728,750. The greater portion of this money is allocated to the building of a canal from the Rhine to the Weser, including the canalization of the Lippe. The waterway from Stettin to Berlin is to be rendered navigable for large vessels, at a cost of two millions, and smaller sums are to be spent on improving the waterway between the Oder and the Vistula, and on the canalization of part of the Oder. This does not mark the end of the canal development. At some future date the canalization of the Moselle-Saar, the connection of Leipzig with Brisa, on the Elbe, and a canal from Schwerin to the Baltic are to be taken in hand. For some years past the Würtemburg government has been studying a scheme to construct a canal from the Rhine, starting at Mainz, utilizing the Neckar, and joining the Danube at Lauingen. By this, goods from the near and far East will be carried at cheap freights from the Black Sea to the North Sea.

The effect of this careful development of canals and natural waterways is apparent in the reduction of the cost of transport by about one-half. The present cost of carriage is now less than 0.25d. per ton per mile. The large number of river and canal boats—22,564 in 1897, as compared with 17,653 in 1877—and the increased utilization of the loading capacity have materially contributed to this reduction. The revenue, which, however, is far from representing even a fair rate of interest on the outlay, is collected from tolls based on the weight and nature of the goods carried. Goods are shipped under a fixed tariff, the rate of which every merchant knows beforehand. The general practice is to leave the navigation of the open river free, while regular charges are made on canals.

THE SYSTEM IN FRANCE.

In France, whose canal system is one of the best in Europe, the practice is different. Practically the whole of the waterways system is the property of the State, which maintains it out of the public funds free of all tolls, thus following the suggestion of the commission of 1872. Since that date the total expenditure on canals amounts to about £100,000,000. In 1901 the details of an exhaustive scheme were published, and in June, 1903, part of it, involving an expenditure of over ten millions was authorized. Most of the money is being spent on improving the navigation of the Garonne, the Orleans, and other canals intended to link Cimbleux to Orleans and Cette and Marseille with the Rhone. The length of canals in France is 3,045 miles, and that of the rivers and streams so used, 4,665 miles.

In a recent report from our consul at Rouen an apt illustration is given of the advantages of water transportation. A button factory, situated on the Canal de Brian, in the Department of the Loire, uses a large quantity of feldspar. This is found in great abundance about 100 miles away from the factory, yet, as there are no canals or waterways connecting the two districts it is found more advantageous to bring feldspar from Norway by sea to Rouen than transfer it directly into lighters and forward it by waterways into the central part of France. The net cost of transport by water is represented approximately by the freight paid to the barge owners since competition prevents them from making any profit over and above a return on their small capital and their expenses. On the average the freight is about 1 centime per ton per kilometer, as against 6 to 8 centimes by rail.

AUSTRIA, BELGIUM, AND HOLLAND.

Throughout Europe the same active policy is being pursued to develop the use of waterways and canals. Austria-Hungary, in the recent enthusiasm for economic development, voted a credit of £10,500,000 in 1901 for the construction of canals between the Danube and the Oder, and thence to the Elbe and the Vistula. The work is to be accomplished by the year 1914, and then further schemes are to be authorized. In Belgium the splendid system of waterways and canals plays an active part in the commercial and industrial enterprise of the country. The total area of the country is only 11,373 square miles, yet there is the high proportion of 1 mile of waterway to every 8.3 square miles of territory.

The traffic by water has grown enormously, from 250,000,000 mile tons in 1880 to 560,000,000 mile tons in 1900. For centuries Holland has been threaded with artificial waterways, yet since 1862 nearly £17,000,000 has been expended on improvements and extensions. The most important canal constructed has been that connecting the port of Amsterdam with the Rhine. Though the total tonnage using the canal has increased from 1,420,257 tons in 1892 to 4,433,257 tons in 1899, it has not been carried out at the expense of the competing railways, which have considerably increased their traffic. Even in conservative Russia a survey has recently been started for the long talked of Baltic to Black Sea canal.

CANALS COMPLEMENTARY TO RAILWAYS.

It is clear, from the illustrations given here of the rapid growth of the canal system on the Continent, that our commercial rivals recognize the importance and the economy of water transport. This rapid extension is due to the great increase of technical knowledge in connection with river and canal works, to the improved forms of ships, and to better appliances for haulage. Abroad it is comprehended that canals, as a rule, do not compete with railways. On the contrary, a canal is complementary to a railway.

By a natural process of adjustment the railways carry lighter and more valuable materials, which must be conveyed rapidly, while canals carry heavier and less valuable goods, which do not require rapidity of transit. Here in this country the only new scheme carried out to a successful issue during the last thirty years is the Manchester Ship Canal. While other nations have been engaged on comprehensive and intelligent schemes we have simply looked on and expressed our opinions on the subject in vague resolutions. The object lessons are numerous, the benefit of thirty years' experience is at our disposal, and yet nothing has been accomplished toward remedying this grave defect in our economic system.

MORPHIA AND FLOUR.

The interruption in the flour trade of China, which resulted from a recent attempt to smuggle morphia in a flour shipment from Hongkong to Amoy, has been checked, and the trade is now about normal. This attempt to smuggle the drug resulted in the death of a number of natives in Amoy and the up-country districts, and has made the customs authorities more vigilant. In this connection Consul Anderson writes from Amoy, under date of June 25:

Flour imports at Amoy are about normal at the present time, and similar reports come from Swatow and other affected ports. In this connection it is to be hoped that something will be done to stop the smuggling of morphia, the dangerous nature of which practice, aside from its relation to the customs revenue and the criminal code, is to be found in this case of flour poisoned by the drug hidden in it. With respect to the smuggling of the drug, the customs commissioner of Amoy, in his annual report now in course of publication, says:

"A special mention should be made of morphia, of which 19,906 ounces were imported in 1902, owing to the impending introduction of the tariff, and 3,101 ounces in 1903, which still paid the old 5 per cent ad valorem duty, while only 8 ounces were reported this year. The market value of morphia at this present moment is still below 3 haikwan taels per ounce, the duty which it is supposed to pay. There is not the least doubt that this dangerous drug is still in great vogue among the Chinese and that the high duty has not in any way stopped its importation, but simply induced the smuggling of this very easily concealed poison."

The smuggling of this morphia, in which trade Americans can have no part, has cost the flour producers of the United States more than the morphia is worth. In view of recent disastrous results, however, it is probable that there will be no more attempts to smuggle morphia in flour for some time to come.

Submarine-Bell Signals.

The Daily Consular and Trade Reports for July 26 contained a statement from Consul-General Holloway, of Halifax, to the effect that the St. Lawrence River was not to have the benefit of submarine-bell signals, for which a contract has been made by the Dominion government. This statement was made on the authority of a leading Canadian trade journal. Consul-General Holloway now reports that the Submarine Signal Company denies the accuracy of that statement, and declares that the bells, for which a contract has been made with the company by the Canadian government, will be installed in due time, large shipments of material having already been made and the work being well under way. The company is required to equip with its apparatus 30 steamers. These need not necessarily be Canadian vessels.

The Chamber of Commerce of Bengal has remonstrated with the Indian railway authorities on account of the scarcity of railroad cars, saying that at least 3,000 more cars are required. The committee was informed that 2,200 new cars would be ordered.

HINTS FOR COTTON MANUFACTURERS.

American manufacturers of cotton goods engaged in the China trade will be interested in the following from Consul Anderson, of Amoy:

An American missionary engaged in work in and near Amoy relates to me the following experience she has had with American cotton cloth, which is very significant and represents, I believe, the actual situation in the cotton-goods business of this portion of China:

While in America some time ago she bought a supply of cotton cloth for general domestic purposes, most of the goods being a very light-weight ducking. She brought it to China and has used portions of it from time to time in the ordinary course of housekeeping and family requirements. Recently it was decided that this missionary should return to the United States, and she commenced to sell all such supplies she had on hand which it was impracticable to take back to the United States, and among them was a supply of this cotton cloth. Her native Chinese tailor had worked with the cloth before, and upon learning that she had some for sale, inquired the price. He was told that he could have what he wanted at 50 cents local currency (about 22½ cents gold) per yard. He took all that was to be had. Later the laundryman of the missionary's establishment asked her if she had any more cloth for sale. He said he had heard that she had cloth of unusual quality which she was selling at 75 cents per yard. She told him the price was 50 cents.

In other words, the tailor had sold the cloth he bought at 50 cents for 75 cents per yard, and the people who bought it were so well pleased that its fame spread from tailor to laundryman, between whom there is no connection. The people concerned declared that nothing of like quality was to be had in the Amoy market for anything like the price at which the tailor sold the goods. The goods were bought by the missionary in a New York department store in the ordinary course of a retail business. It was sold to the tailor at a rate which represented its cost and transportation charges.

ORGANIZATION NEEDED.

There is no question but that American cotton interests have not the business they ought to have in China and that they will have if the proper methods of securing it are followed. The goods bought by the Chinese at a price similar to that paid for the American cloth above described are of British manufacture and generally contain a large amount of clay and other adulterants. They are bought in Hongkong, and represent British efforts to sell British goods without regard to better goods to be had elsewhere for the same money.

The Chinese of Amoy really have no opportunity to buy American cotton goods, and it is difficult to see wherein this is the fault of any one but the American manufacturers mostly concerned. Until they secure the proper introduction of their products they can not expect to sell their proper share of cotton goods, and the first needful element in the campaign for business which they must make if they expect to secure it is the maintenance of the high quality of goods of grades which are supposed to represent wear. American cotton interests need organization, and I believe that such organization should commence in the United States rather than in China. The work in China, in my opinion, should be done through a corps of representatives working through Chinese agents.

AMERICAN LUMBER DIRECT TO NIUCHWANG.

United States Consul-General Sammons, of Niuchwang, writes that the first American sailing vessel to enter that port arrived there April 22. The vessel is a five-masted schooner named *Crescent*, and she carried 1,585,899 feet of lumber from Blakely, Wash., which lumber is known locally as Oregon pine. The *Crescent* reached Niuchwang by way of Taku. The voyage occupied seventy days from Puget Sound to the Bay of Pechili. The *Crescent's* registered tonnage is 1,334 tons. Having a draft of 21 feet, the schooner was obliged to lighten cargo in order to cross the bar at the entrance of Liao River. She was drawing 21 feet, and when lightened to 19 feet, sailed inside the bar and was towed to Niuchwang.

The consul says that as a rule American goods reach Niuchwang via Japanese or Chinese ports, although vessels drawing from 16 to 19 feet according to the season, can cross the bar with safety, and once inside the bar there is ample depth of water to the docks or anchorage at Niuchwang.

As a rule, goods shipped direct arrive in much better condition than when subjected to handling and reshipment through other ports. This season the Standard Oil Company will send three cargoes of kerosene oil direct to Niuchwang from Philadelphia via the Suez Canal.

LACK OF TRANSIT FACILITIES WITH CEYLON.

Consul W. Morey, in accounting for the relatively small consumption of American products in Ceylon as compared with the consumption of Ceylonese products in the United States ($229,881 against $2,848,510), reports as follows concerning the trade facilities between that colony and the United States:

The transit facilities between the United States and Ceylon are still very unsatisfactory. There are no goods arriving here direct from the United States, therefore all American goods, except kerosene oil (one steamer coming direct with 1,685 tons of oil during the past year), come via transshipment ports, involving high freights and much delay and some uncertainty about the port of original shipment. This reduces the volume of trade from the United States, and at present there is no prospect of change.

It is different with exports, as trimonthly steamers, mostly from Calcutta, call here and carry to New York and Boston from 1,000 to 2,000 tons each of Ceylon products at a rate of freight averaging about $8 per ton, and performing the passage in from forty to fifty days, which is in marked contrast to the time absorbed in the transshipment of goods from the United States, generally upward of sixty days, the freight being about $15 per ton.

TRADE OF FORMOSA.

Consul Fisher, of Tamsui, furnishes figures of Formosan trade returns for 1903 and 1904. The total commerce for 1904 was $22,816,958, against $21,301,920 for 1903, almost equally divided between exports and imports. The figures are shown in the following table in United States currency:

	With foreign countries.		With Japan.	
	1903.	1904.	1903.	1904.
Exports	$5,517,004	$6,170,780	$4,845,271	$5,194,791
Imports	5,364,641	6,393,544	5,575,004	5,057,843
Total	10,881,645	12,564,324	10,420,275	10,252,634

The principal feature which distinguishes the total export trade of 1904 from that of 1903 is the increase in the amount of sugar exported to Japan. The exportation of tea shows a decrease of 5 per cent, which is practically balanced by the increase in that of rice. The other items of export in which increases are noticeable are mostly comestibles exported to China.

The exports consisted principally of rice, tea, sugar, camphor, camphor oil, and China grass. The imports were opium, kerosene oil, sugar, timbers, leaf tobacco, cottons, sateens, shirtings, and rice flour. Many of these show remarkable gains. The following table tells the story of the island's imports, by countries, for 1904, and gives gain or loss:

From—	Value.	Increase (+) or decrease (−).	From—	Value.	Increase (+) or decrease (−).
		Per cent.			*Per cent.*
Japan	$5,057,843	− 9	Dutch India	$23,419	+294
China	2,909,527	+ $1\frac{2}{3}$	French India	21,159	− 46
British India	837,590	+105	Siam	15,508	− 59
United States	723,119	+ 29	Philippine Islands	13,824	− 6
Great Britain	684,743	− 19	Belgium	13,557	− 50
Hongkong	130,613	+ 78	France	6,587	− 43
Germany	92,043	+ 45	Other countries	767,892	....
Russian Asia	66,706	− 19			
Australia	58,400	+ 5	Total	11,451,387	+ 5
Korea	28,857	+ 7			

DANGEROUS MEAT PRESERVATIVE.

The president of the Berlin police has issued the following warning, which has been published in various German newspapers:

A preserving substance under the name of "sterilisol" has been put upon the market, with the statement that no objection can be found to its application and that it is in no way injurious to health. Contrary to this it has been shown by investigations made by the chemical laboratory of the imperial health office that samples of this preparation contain 2½ per cent of formaldehyde. According to the opinion of the royal scientific deputation for medical affairs formalin, as well as all preparations which contain it, are to be considered as preservatives seriously injurious to health in all articles of nourishment and enjoyment. In the preparation of meat for sale the application of formaldehyde has been expressly forbidden by statutory regulations.

WINE AUCTION SALES IN GERMANY.

Consul Schumann, of Mainz, reports the following table, showing the quantity of wine disposed of during the annual spring wine auction sales in the various wine-growing districts of Germany, and the amounts realized:

	Gallons.	Amount.
Palatinate	993,200	$465,265
Middle Rhine	34.400	14,490
Moselle	501,600	437,751
Nahe	176,720	87,507
Rheingau	539,840	618,557
Rhenish-Hesse	656,213	362,314
Total, 1905	2,901,973	1,985,884
1904	2,433,066	1,490,907
1903	2,593,440	1,621,585
1902	1,930,055	2,195,579
1901	2,006,740	1,754,122
1900	1,334,980	1,384,084

Demand for Manila Hemp.

Consul Burrell, of Magdeburg, Germany, reports that importers of that city have requested to be put in touch with American firms exporting Manila hemp. These importers have heretofore purchased through foreign agents and state that they are obliged to wait for an unreasonable time before being supplied, and that the conditions under which they buy are unfavorable. Any matter sent to Consul Burrell relative to the subject will be delivered to the parties interested.

Consul-General Guenther writes that Arthur A. Brandt, of Berlin, NW. 24 Cuxhafenstrasse, is offering his services as an agent for American machine and apparatus builders. He wants first-class houses, and can give good references, and intends to open an office in Vienna to supplement the work of his Berlin office. The consul-general goes no further than to give the name and announce the fact.

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DEPARTMENT OF COMMERCE AND LABOR—BUREAU OF MANUFACTURES

DAILY CONSULAR and TRADE REPORTS

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SHIPPING ON THE YANGTZE.

THE GREAT ARTERY CARRYING BULK OF CHINESE COMMERCE.

Consul Thornwell Haynes, writing from Nankin, says that most foreign enterprises in China are conducted under the terms of what are called "concessions," which are practically analogous to American public franchises. He adds:

But shipping on the Yangtze is not. It is a free-for-all concession, and at present there are many striving to get the largest share. It is no wonder. The Yangtze Valley is the commercial heart of China and comprises an area of 600,000 square miles, inhabited by approximately 180,000,000 industrious and peaceable people who do not hesitate to buy. The rivers of China are of the utmost importance to the Empire, inasmuch as they afford what is practically the only means of communication between the different territories. Roads are few and bad, the highway consisting in most instances of the merest track. The great rivers, however, with their numerous tributaries and canals, traverse the Empire in every direction and afford a cheap and ready means of transport, which has rendered the vast trade of the country possible.

The most important of the rivers of China are the Yangtse, the Hoangho, the Si, the Pei, and the Min. The Yangtse ranks third in size among the rivers of the world. It traverses the provinces of Sechuan, Yunnan, Hupeh, Anwei, and Kiangsu. Its total course covers more than 4,000 miles, and it is navigable by large vessels for more than 1,000 miles from its estuary. Its most important tributaries are the Kia-ling and Han. It also affords communication with two lakes of considerable extent. The most remarkable feature, perhaps, in connection with the Yangtse is its extraordinary variation in level, which alternates as much as 100 feet in the higher reaches, where the banks narrow and confine the stream within a series of remarkable gorges, and 50 feet at Hankow, where the river is more than a mile wide. These phenomena are due to the summer melting of the snows on the Tibetan plateau, where the river takes its rise at a height of more than 15,000 feet and the water rushes down in a flood which at times submerges the country for a breadth of 20 miles.

The most important adjunct to the rivers named was the Grand Canal, an undertaking completed more than six hundred years ago.

ing a lifting power of 1½ tons, others of 2 tons, and one of 30 tons. The oil installations at the south end of the river quays cover an area of 30 hectares (74.131 acres). Along the entire length of the river quays run the rails of the State Railway. The depth of water at low tide at the foot of the quays is 8 meters (26.2 feet), and at high tide 12.29 meters (40.3 feet), the top of the quay wall being 2.60 meters (8.5 feet) above the average high tide.

DOCK SYSTEM AND QUAYS.

Besides the petroleum installations at the south there are three small docks used by barges and river craft and occasionally by small steamers. At the northern end of the town the great docks properly so called are situated. The smallest of these were constructed in 1806, and are known as the Bonaparte and Guillaume docks. The others were constructed at various periods during the nineteenth century.

The entire dock system and the quays are supplied with hydraulic force from two powerful central stations at the northern and southern extremities of the city, respectively, giving a pressure of 50 atmospheres, which supplies the motive power for the 143 cranes already referred to and a further 188 cranes for the inner docks, besides two large cranes of 40 tons each, two of 20, and one of 10 tons. There is also a coal tip capable of lifting a truck of 25 tons and loading ten trucks per hour.

Communicating with the inner basins are six well appointed dry docks, the largest of which is 84 feet wide and admits a vessel 520 feet in length. There are two small dry docks of 33 and 39 feet in width and 156 and 225 feet in length, respectively, and three larger ones of 48 feet in width and 430 feet in length. There are also two small dry docks of private ownership on the left bank of the river accommodating vessels of from 800 to 1,000 tons. Unfortunately, however, there is no dry dock large enough to accommodate the great ocean liners of the North German Lloyd, Hamburg-American Line, Red Star Line, and other companies, all of which are obliged to go to England, Germany, or Holland for dry-dock repairs.

Along the south quay of the Lefebvre dock is situated the large warehouse for the grain in bulk with a capacity of 3,500 hectoliters (9,905 bushels) and owned by a private company operating under a forty-year concession of the land. The establishment includes a complete electric-lighting plant and a modern system of elevators, etc. Along the quay wall are underground tunnels through which run the belts carrying the grain from any point of the quay upon which it may be dumped into the elevators. Besides these modern improvements and complete installations for facilitating the loading and discharging, there is also an excellent railway service. All along the different lines of quays the railroad cars run so near to the steamers that in most cases the cranes can, with a single swing, lift the cargo from the hold and lower it into the railway cars, and vice versa.

OWNERSHIP AND CONTROL.

The river quays are built at the expense of the Belgian Government, but in regard to their repairs, the ordinary upkeep is undertaken at the expense of the town, although in the case of any serious accident the Government undertakes the repairs. The entire inner dock system is the exclusive property of the municipality. The management and control of the port are confided to the board of aldermen and the municipal council, the Alderman of Commerce being the executive officer in charge of the port. It is to him that the harbor master and his subordinates are responsible. The Alderman of Public Works is charged with the technical service and has immediately under him the chief engineer of the city and his subordinates. The policing of the river, lighting, buoying, pilotage, management of the railway lines along the quays, and the customs service are entirely in the hands of the Government. The policing, pilotage, and management of the inner docks is under the control of the municipality.

The total cost of construction of the river quays at Antwerp was $19,200,000, all of which was defrayed by the Government. With regard to the furnishing of the quays, construction of the sheds, erection of hydraulic cranes, light installations, etc., which was $2,400,000, was borne by the town authorities.

The expenditure on the Antwerp inner-dock system which, as before stated, belongs entirely to the municipality, has amounted to $23,040,000, making a total for river quays and docks of $44,640,000. To meet the expense of the construction of the docks, the city of Antwerp raised loans from time to time.

DIVISION OF DOCK DUES.

All the dues paid by vessels entering the docks at Antwerp are collected by the municipality and are paid into the city treasury in the same manner as the other communal taxes. This is not so with the dues levied on vessels using the quays. While the quays were constructed entirely at the expense of the Belgian Government without the pecuniary intervention of the municipality, the latter body was responsible for the furnishing and general installation of the quays. The dues paid by vessels using the quays and the barge docks at the south of the city are divided in the following manner between the Government and the Antwerp municipality, the arrangement having been made after taking into account the various interests of the two parties:

From the gross receipts is first deducted for the municipality the amount of the jointure or preference grant made by them, i. e., 150,000 francs ($30,000), and, in addition, the costs of administration, fixed by a convention at 45.85 per cent. The balance is divided in accordance with the pro rata of expenditure upon the original constructions and installations, 92.68 per cent being paid to the general Government and 7.32 per cent being retained by the municipality.

In regard to the river quays more recently constructed a similar division is made, the preference grant of the town amounting to 80,000 francs ($16,000) being first deducted. The administration expenses are calculated at an average of such expenses for three years immediately preceding, and of the balance the Government receives two-thirds and the town one-third.

To illustrate the manner in which the maritime quay dues at Antwerp are divided, the gross receipts of dues for the river quays and south barge docks in 1905 may be taken. In 1905 these dues amounted to 1,067,796 francs ($213,559). From this total the initial sum of 150,000 francs ($30,000) was deducted for the profit of the town, leaving 917.796 francs ($183,559). Of this latter amount 45.85 per cent (equal to 421,809 francs, or $84,361) was deducted, also payable to the town. The remainder, 495,987 francs ($99,197) was divided between the general Government and the town, 92.68 per cent going to the former and 7.32 per cent to the latter. Therefore of the gross total dues, amounting to 1,067,796 francs ($213,559), 459,681 francs ($91,936) was received by the general Government, and 608,115 francs ($121,623) by the town.

RIVER QUAY DUES.

The dues levied for the recently constructed river quays amounted in 1905 to 481,708 francs ($96,341). From this total the initial sum of 80,000 francs ($16,000) was deducted, leaving 401,708 francs ($80,341). From this latter amount the average cost of administration expenses was deducted. These actual administration expenses have not as yet been calculated by the authorities, but I am informed that an almost accurate average is arrived at by deducting 45 per cent of the total, less the original town grant. This 45 per cent amounts to 180,768 francs ($36,193), leaving 220,940 francs ($44,188). Of this balance the Government receives two-thirds, or 147,293 francs ($29,458), and the town one-third, or 73,647 francs ($14,729). Therefore of the total received for the new quays, amounting to 481,708 francs ($96,341), the general Government will receive 147,293 francs ($29,458), and the town 334,415 francs ($66,883).

On the whole of the river quay dues, therefore, amounting in 1905 to 1,549,504 francs ($309,900), the proportion of the general Government was 606,974 francs ($121,394), and that of the town 942,530 francs ($188,506).

Of the total dues levied for the Antwerp quays it may be said, generally speaking, that three-fifths are received by the municipal authorities and two-fifths by the State.

GOVERNMENT'S LATEST PROJECT.

The Government project begins by cutting a canal, forming a quarter of a circle, entering the river at the Kruischanz, a point just above the town of Lillo, and joining the dock system at Antwerp by entering the northwest wing of the new intercalary docks. Extending inland from the right bank of the canal will be nine open basins. This canal will be of gigantic proportions, 8 kilometers long (more than 5 miles) and 815 feet wide. The canal will enter the river at the Kruischanz by three sluices 975 feet in length and 98 feet wide and a depth of 39 feet. The open basins along the right side of the canal will be 3,900 feet long by 650 feet wide. Near the canal sluice gates there will be a circular open basin of 1,625 feet in diameter. Dry docks 812 feet long will also be constructed on the same side of the canal.

Not until the canal is completed will the work on the new bed of the river be commenced. The new bed will begin at a point above the Kruischanz, and the new canal will reenter the present bed of the Scheldt just above the Austruweel bend, at the point where Cupola A stands, between the new grain warehouse and the Rhine quay.

While a dam will be built across the old bed of the river, the new canal will be open for navigation, so that at no time will there be an

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8,335, 18,405, 24,430, and 4

machines.

Germany exported in 1903, 165,722; 1904, 187,405; 1905, 239,571; and in 1906, 300,692 machines, mostly to Russia and Austria-Hungary. Thus three years ago imports of American machines did not amount to quite one-half of the total, but during the last three years they amount to more than two-thirds of all such imports.

WATERWAYS IN GERMANY.

RESPONSIBILITY FOR RIVER AND HARBOR IMPROVEMENTS.

Consul Jay White, of Hanover, writes from official data as follows concerning harbor and river improvements in Germany:

The improvement of navigable rivers and the construction, maintenance, and improvement of harbors are carried out by the States interested. The Empire only takes care of naval stations. Private corporations or individuals are permitted to undertake such work solely for their own use and under the supervision of the several States. The costs for the construction, maintenance, and improvement of harbors are defrayed by the States concerned, the Empire giving a proportional contribution if any conditions of national importance are fulfilled. This, however, is seldom the case. If the construction of a harbor is of especial interest to an individual city that city pays a proportionate amount toward the costs. The few cities that are the actual possessors of a harbor are liable for all the costs, though the State may, if it see fit, make a contribution. These proportionate contributions rarely occur, and up to the present time there has been no fixed scale according to which they have been arranged. Each case is decided separately and in the negotiation the community concerned is qute independent of the State.

The quays and storage room, etc., belonging to the harbor are for the most part let in lots to individuals or corporations. There are a few public quays and the charge for their use is in accordance with the tonnage of the vessel and the time taken. It is to these fees that the State authorities look for a return for the money expended, but to prevent trade being seriously affected the amount of the fees is in many cases merely nominal.

TOLLS ON CANALS.

A regular fee is charged for the use of canals and canalized rivers, but none for rivers that have been made navigable or improved. Such fees are collected by local authorities and transmitted to the State or city funds. All the more important improvements have to be sanctioned by the parliamentary committee. Works executed by the indivdual States are carried out by contract, which is considered the more economical method. The contractors have to furnish a large bond and pay a high penalty if the work is not completed in the specified period. The contractors have no appeal to the ordinary law courts, but disputes are settled by a special board of official engineers. States and communities that build the harbors also, as a rule, build the necessary docks, quays, stores, and machinery required for them. Some large corporations or firms that have hired space construct their own works.

The approaches from the sea to the greater towns on the seaboard have a minimum depth of 19.68 feet to 29.52 feet. The outer harbors have a minimum depth of 36.08 feet.

River.	Length navigable.	Mean depth.	Mean width.
	Miles.	*Feet.*	*Feet.*
Rhine	447	9.84	1,968
Weser	279	2.62	590
Elbe	509	3.28	1,279
Oder	385	2.95	656
Weichsel	155	8.20	3,280

The Rhine, Elbe, and Weichsel are navigable before entering Germany, the Weichsel to the extent of 434 miles. Compared with the mileage of the rivers the canals are unimportant, their total length reaching 248 miles. Their depths correspond with the minimum depth of the rivers. As an argument in favor of the further construction on inland waterways in Germany it is claimed that in England and America the item of freight is only from 7 to 10 per cent, while in Germany it is from 28 to 30 per cent. It is also stated that the railways will not be able in the future to accommodate the increased traffic.

SINGAPORE.

EXPORTS FOR SEPTEMBER.

Deputy Consul-General George E. Chamberlain, of Singapore, furnishes a report showing the principal exports from that port and from Penang during the month of September and now en route to the United States, England, and the Continent of Europe:

Articles.	United States.	England.	Europe.
	Pounds.	*Pounds.*	*Pounds.*
Coffee	148,733	....	257,733
Gambier	2,227,466	1,303,600	1,797,200
Gutta-percha	63,600	92,533	205,200
Gutta-percha jeletong	1,904,133	61,466	175,866
Gum copal	687,600	645,733	483,200
Nutmegs	40,266	12,666	....
Pepper:			
Black	342,800	46,000	515,200
White	213,733	627,333	519,600
Rubber	34,666	140,400	114,400
Rattans	958,733	339,333	1,752,133
Sago	1,608,933	5,109,600	2,289,466
Tapioca	316,000	1,842,133	629,733
Tin	728,233	4,695,200	695,866
Pineapples (cases)	1,334	4,600	2,712

EXPORTS FROM PENANG.

Articles.	United States.	England.	Europe.
	Pounds.	*Pounds.*	*Pounds.*
Coffee	67,300	....	22,400
Cloves	....	1,200	....
Nutmegs	18,266	10,933	....
Pepper:			
Black	627,600	125,333	164,400
White	33,466	22,400	101,066
Rubber	....	42,133	6,800
Rattans	....	....	13,200
Tapioca	636,133	1,921,200	468,933
Tin	1,751,333	2,006,933	840,800

FOREIGN COMMERCE OF GREECE.

Mr. Wilson, secretary of legation at Athens, reports on the foreign commerce of Greece. He says there is a 21 per cent increase in less than ten years. He writes:

The foreign commerce of Greece in 1896 was about $23,260,000 imports and $14,500,000 exports. In 1904 it was: Imports, $27,540,000; exports, $18,260,000.

Table of foreign trade expressed in millions of francs.

Articles.	Imports.		Exports.	
	1896.	1904.	1896.	1904.
Live stock	2.9	6.9	0.1	0.0
Animal products	4.5	5.9	2.9	3.4
Fish products	5.7	5.4	1.3	0.2
Agricultural products	36.7	35.4	31.1	43.5
Oil and seed	0.6	2.7	4.2	7.0
Forest products	4.5	12.4	3.7	1.9
Minerals	13.2	12.3	17.4	19.2
Chemicals and drugs	8.0	6.8	0.8	0.3
Wines and liquors	0.3	0.3	6.2	11.4
Cloth, etc	22.8	22.7	0.2	0.2
Worked metals	3.6	7.8	4.1	2.5
Miscellaneous	13.5	19.1	0.5	1.4
Total	116.3	137.7	72.5	91.3

The following table shows the exports and imports of Greece according to the country of their origin in 1896 and in 1902, the last year for which the figures are available. Between these dates Austria-Hungary and Russia chiefly have increased the amount of their goods imported into Greece, consisting mostly of cereals. Next comes France with 2,800,000 francs and Italy with 2,600,000 francs. The exports of Greece to all these countries except Turkey and Russia have increased.

Trade by countries in millions of francs.

Countries.	1896.		1902.	
	Imports.	Exports.	Imports.	Exports.
England	29.4	18.2	28.7	20.0
Russia	24.1	7.6	30.8	1.9
Turkey	14.4	7.9	11.9	6.4
Austria-Hungary	11.8	6.9	21.2	9.3
Germany	10.2	3.3	11.0	7.3
France	8.5	6.5	11.3	7.9
United States	4.5	2.7	3.2	4.1
Italy	2.9	3.9	5.5	4.7
Other countries	10.5	15.5	13.6	18.1
Total	116.3	72.5	137.2	79.7

THE GREEK MERCHANT MARINE.

Greece is making considerable progress in building up her merchant marine. It is the Greek industry which has made the greatest progress during the last decade, the growth of which is shown by the following statement. Moreover, it appears that in proportion to its population Greece owns a larger mercantile fleet than any other country of Europe, excepting England, Norway, and Denmark.

The Greek merchant marine shows a steady decline in sailing vessels from 1,165 in 1897, of 246,429 tons, to 889 in 1904, of 170,147 tons, but a gain in steamers from 109—tonnage, net 92,492—to 201 ships of 214,841 net tons.

EUROPEAN CANALS.

Consul Mahin, of Nottingham, England, calls attention to a movement in Europe to revive interest in canals or in land waterways of all kinds. He cites the deplorable situation in England. He writes:

Time was when the canal system of England was considered the best in the world. Now it is deplored as the worst.

Its decline was simultaneous with the rise of the railway. The best of the canals were bought by the railway companies and made inoffensive appendages—bought cheaply, too, so that, being utilized for certain classes of freight, they do not represent anything in the nature of "watered stock."

Though but 1,264 of the 3,936 miles of canals in Great Britian are owned by the railways, the fact that the cream of the system has been thus absorbed has apparently taken all life out of the larger portion remaining in other ownership. Of this major part 415 miles are abandoned. Of the entire system only about 230 miles are capable of admitting boats carrying over 90 tons, about 2,000 miles will accommodate boats carrying 40 to 60 tons, while the remainder are fit only for small barges carrying up to 30 tons.

Invidious comparison is made with the waterways of France, Germany, Belgium, and other countries. Continental canals will, it is claimed, carry barges of 250 to 500 tons capacity, and even larger; and that these are not more expensive to operate than the English barges, because a small one requires as many men to look after it as a large one. We are told that France has 7,000 miles of State-owned and toll-free canals, upon which it spent $200,000,000 in the past twenty-five years, and has schemes in hand for spending $100,000,000 more. Germany has spent $105,000,000 on its 9,000 miles of canals in ten years, and Belgium $80,000,000 on its 1,400 miles in the last twenty-five years. Austria-Hungary is about to expend $150,000,000, and Italy has large projects in contemplation to make her canals more perfect.

The dream of Russia is to build a system of canals that will put the Caspian and all the country near it in close communication with Europe by way of the Black Sea and the Mediterranean. This is to be done by uniting the Volga with the Don near Tzaritsin. Another of her gigantic canal schemes, long projected, is to unite the Baltic by means of the Gulf of Riga with the Black Sea. This is to be effected by joining the waters of the Dnieper with the Duna; still another is to unite the Gulf of Finland, a bay of the Baltic, with the White Sea, cutting a canal via lakes Onega and Ladoga.

These statements are being so pressed home by writers in English periodicals that the business interests are now convinced that something must be done, and it is practically certain that measures will be introduced in the next session of Parliament to place the British canal system beyond the reach of invidious comparison.